

Appln.. 10/660,543
Amdt. Dated ~~June 29~~, 2005
Reply to Office action dated May 17, 2005

REMARKS/ARGUMENTS

Claims 1-5, 8-13, 16 and 17 remain in this application for consideration.

Claims 6, 7, 14 and 15 are provisionally withdrawn, and Claims 1 and 17 are amended better to distinguish the applicant's invention over the newly cited prior art patent to Brenna et al.

As defined in claim 1, as herein amended, the applicants' claimed invention is directed to an apparatus for measuring the displacement of an object in a two-dimensional plane (e.g. either horizontal or vertical). That apparatus includes, as now defined in Claim 1, a member that is movable along a fixed, one-dimensional path by an amount corresponding to the distance moved by, or the relative displacement of, the object whose displacement is being measured. An array of spaced electrical contacts are arranged along at least one side of that path so that as the movable member moves along that path it comes into electrical contact with one of these contacts to, in turn, operatively connect that contact to one of a plurality of distance- measurement-storing locations in a data-storing means. The distance-measurement data stored in that memory location is applied to an output device, which thus indicates the thus-measured displacement of the object.

The previously submitted claims stand rejected under Sec. 112(b) as being anticipated by the newly cited Brenna et al patent. It is submitted that the

applicant's currently claimed invention is distinguishable from that disclosed in Brenna et al, which differs from the applicant's claimed invention in both its intended function - it does not measure distance or any other parameter - and in its construction and design. Rather what is disclosed in Brenna et al is a crank level indicator.

Although there may be a superficial similarity between certain aspects of the Brenna et al crank level indicator and the applicant's distance measuring apparatus, there are several significant and patentable distinctions between them, particularly as the applicant's apparatus is defined in the currently submitted claims. In the Brenna et al level indicator a free-swinging pendulum carries a sensor activator at its tip or lower end. A sensor unit fixed to the crane base contains concentric rings of conducting sensor portions 120 that surround a central in-level or no-tilt sensor portion 122. Each of the sensor portions is connected respectively to one element of a "suitably programmed" programmable logic array (PLA) chip.

As the crane tilts, the sensor unit attached to the crane base tilts with it and causes the pendulum tip to contact one of the concentric sensor unit 120 as determined by the crane attitude or degree of tilt. The section of the PLA chip to which that out-of-level sensor portion is connected produces a signal that indicates the direction and degree of the tilt of the crane.


Thus, unlike the applicant's claimed distance-measurement apparatus, the Brenna et al level indicator device does not measure displacement, either angular or linear, along a two-dimensional (horizontal or vertical) path. It merely

indicates to the crane operator the amount of tilt off-level of the crane, that is, the orientation of the crane relative to the perpendicular. Consistent with this desired result, Brenna et al does not disclose or suggest moving a member along a fixed, one-dimensional path of contacts so that for each of the contacts engaged by the movable member as it moves along this path, a unique measurement of the angular or linear displacement of an object with which the movable member is operatively associated is provided at an output means. As now defined in Claim 1, the contacts in the applicant's distance-measurement apparatus are arranged along at least one side of the fixed one-dimensional path of movement of the movable member. In the Brenna et al level indicator, in contrast, the contact sensors are arranged in concentric circles arranged radially with respect to the movement of the pendulum tip. One of ordinary skill in the art would thus not be led to the applicant's distance-measurement apparatus from the teachings of Brenna et al.

Based on the foregoing discussion of the claims as herein presented and the newly cited prior art, it is submitted that the cited prior art does not suggest or disclose the applicants' invention as defined in the amended claims. Applicants accordingly respectfully request that a timely Notice of Allowance be issued in this case. Since the claims are under Final Rejection the entry of this amendment to the claims is requested to place the claims in better condition for an appeal should that become necessary.

Respectfully submitted.

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